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Nadolink

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## [54] PHOTOELASTIC STRESS SENSOR

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[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

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[52] U.S. Cl. .... 73/800; 73/760

[58] Field of Search ..... 73/800, 801, 760, 73/860

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## [57] ABSTRACT

A stress detection apparatus is provided. A piece of semiconductor grade, single crystal silicon mounted on the material is illuminated by an infrared source with radiation having a wavelength in the range of 800–1100 nanometers. An infrared detector monitors the photoelastic effects of illuminating the single crystal silicon with the radiation.

17 Claims, 1 Drawing Sheet

